

JOINT TYPHOON WARNING CENTER 50TH ANNIVERSARY

May 1959 - May 2009



29 APRIL 2009

**FORD ISLAND CONFERENCE
CENTER**

PEARL HARBOR, HAWAII

JTWC 50th Anniversary Celebration

MUSICAL PRELUDE
U.S. Pacific Fleet Band

ARRIVAL OF OFFICIAL PARTY

COLORS

NATIONAL ANTHEM
MSgt Robert (Rob) Williams, USAF *vocalist*

INVOCATION
Lt Col Steven Voyt, USAF

OPENING REMARKS
Mr. Robert (Bob) Falvey
Director, Joint Typhoon Warning Center

INTRODUCTORY REMARKS
Colonel Scott C. Van Blarcum, USAF
RDML Dave Titley, USN

GUEST SPEAKER
RDML Tom Copeman, USN

CLOSING REMARKS
Mr. Robert Falvey

DEPARTURE OF THE OFFICIAL PARTY

CAKE CUTTING

RECEPTION





Robert J. Falvey

United States Air Force

Director, Joint Typhoon Warning Center

Mr. Robert J. Falvey, a retired USAF Lieutenant Colonel, is the Director of the Joint Typhoon Warning Center (JTWC), Pearl Harbor, Hawaii, a United States Air Force and Navy jointly manned unit responsible for tropical cyclone reconnaissance and warnings for military operations in the Pacific and Indian Oceans. The JTWC provides strategic level resource protection products for Department of Defense assets in excess of 120 billion dollars and over 350 thousand permanently assigned personnel.

Mr. Falvey entered the Air Force in 1986. He received his commission through the Reserve Officers Training Corps program at Lyndon State College, Lyndonville, Vermont. His first assignment was supporting aerial refueling operations and the National Emergency Airborne Command Post (NEACP) while assigned to Detachment 26, 26 Weather Squadron, Grissom AFB, Indiana. After two years, he was reassigned to the Joint Typhoon Warning Center, Nimitz Hill, Guam as a Typhoon Duty Officer where he performed tropical cyclone forecasting duties supporting military and civil operations in the Pacific and Indian Oceans. Mr. Falvey was selected for an Air Force Institute of Technology (AFIT) assignment and received his Master of Science in dynamic meteorology from the Colorado State University, Fort Collins, Colorado. Upon completion of his degree, he was reassigned to the United States Air Force Environmental Technical Applications Center (USAFETAC) at Scott AFB, Illinois as an environmental simulation analyst. He then transferred to Hill AFB, Utah, where he commanded an 18-man weather flight providing weather support to two F-16 fighter wings, the Ogden Air Logistics Center and the Utah Test and Training Range (UTTR). Next, Mr. Falvey returned to the Pacific basin as the Chief, Weather Standardization and Evaluation Branch and Chief of the Weather Operations and Aerospace Sciences Branch for the Headquarters Pacific Air Forces Weather Division located at Hickam AFB, Hawaii. Next, Mr. Falvey became the Air Force liaison to the National Centers for Environmental Prediction (NCEP) in Camp Springs, Maryland. He was responsible for leveraging NOAA's \$1B research and development efforts and current operational capabilities to enhance support to Air Force and Army warfighter operations by establishing strategic partnerships with the National Weather Service (NWS). After two years, he was transferred to Asheville, North Carolina to become the Director of Operations at the Air Force Combat Climatology Center, where he was responsible for the production and delivery of climatology products to support Department of Defense and other United States government agency operations. Mr. Falvey assumed the duties as Director of the Joint Typhoon Warning Center in July 2006. He retired from active duty in the grade of Lieutenant Colonel in October 2008.

Mr. Falvey holds a Master of Science degree in Dynamic Meteorology,

HISTORY OF THE JOINT TYPHOON WARNING CENTER

JTWC Mission: Provide tropical cyclone analysis, forecast and warning support for Department of Defense, and other US Government assets in the Pacific and Indian Oceans as established by Commander, United States Pacific Command

Today's Joint Typhoon Warning Center traces its origins to June 1945, when the Fleet Weather Center (FWC)/Typhoon Tracking Center was established on Guam after the Pacific Fleet experienced significant loss of men and ships in the typhoons of December 1944 and June 1945. The Typhoon Tracking Center was one of three Navy and two Air Force units responsible for tropical cyclone reconnaissance and warnings in the Pacific. In 1950, the Department of the Navy authorized Fleet Weather Central to provide weather services to civil agencies and the general public on Guam, a service that was expanded in 1953 to include all the Trust Territories of the Pacific Islands. To this day, the Department of Defense is responsible for typhoon warnings for the Federated States of Micronesia.

In 1958, the Department of Defense weather services and the U.S. Weather Bureau formed the Joint Meteorology Committee to U.S. Pacific Command, and by June of that year, proposed the formation of a joint Navy and Air Force center for analysis and forecasting of typhoons. After approval by the Joint Chiefs of Staff, the Commander in Chief, U.S. Pacific Command, directed the formation of a Joint Typhoon Warning Center (JTWC) at Nimitz Hill, Guam, under the Commanding Officer of Fleet Weather Central (FWC) with an Air Force Officer designated as the Director. The JTWC was initially chartered to provide warnings on all tropical cyclones west of 180 degrees longitude to affected U.S. government agencies, determine typhoon reconnaissance requirements, prepare annual typhoon summaries, and conduct tropical cyclone forecast and detection research as practicable. Two officers and three enlisted personnel from each Service prepared those first warnings, issued four times daily, forecasting position and intensity through the next 48 hours. Since 1958, the mission has remained largely unchanged, while the area of responsibility has expanded to include the entire Pacific and Indian Ocean basins.

Housing JTWC did not exempt the FWC from the impacts of typhoons, as demonstrated by Typhoon Karen in November 1962 when the storm destroyed the building they occupied, causing the

HISTORY CONTINUED

Manned aerial weather reconnaissance began in January 1945 with the arrival of the 655th Bombardment Squadron on Guam. The B-24 aircraft were used to conduct en route and target weather reconnaissance. However it wasn't until June of that year that the 655th was re-designated the 55th Reconnaissance Squadron, that the first typhoon reconnaissance occurred. In 1945, the 54th Weather Reconnaissance Squadron was established at Andersen AFB, Guam and the 55th rotated back to the United States. At this time, the weather reconnaissance mission transitioned to the WB-29 airframe. Other aircraft used include the Super Constellation, flown by the Airborne Early Warning Squadron One (VW-1) from Naval Air Station, Guam, and the WC-130. Aerial reconnaissance in the western North Pacific continued until 1987, when the Air Force transitioned the mission to weather satellites. The Defense Meteorological Satellite Program (DMSP) polar orbiting satellites were the mainstay along with National Oceanic and Atmospheric Administration (NOAA) polar orbiters and indigenous geostationary satellites. Satellite reconnaissance continues to be the primary means to assess tropical cyclone location and intensity across the entire JTWC area of responsibility.

JTWC moved to its current location in Hawaii in 1999 after the 1995 Base Realignment and Closure (BRAC) committee recommended the closure of the Naval Pacific Meteorology and Oceanography Center, Guam. The Air Force members of JTWC are administratively assigned to the 17 Operational Weather Squadron, Hickam AFB, Hawaii currently under Command of Lieutenant Colonel Kurt Brueske and the Navy members are assigned to the Naval Maritime Forecast Center under Command of Captain Grant Cooper. A small staff support watch standing/shift working members of JTWC who work 12 hour rotating shifts to maintain a 24 hour per day, 7 day a week, 365 days a year watchful eye for tropical cyclone development. This 2-person team is responsible for determining the center position, current intensity, forecast locations and forecast intensity for 89% of the worlds tropical cyclones. To date, JTWC has issuing warnings on more than 2,500 tropical cyclones throughout its area of responsibility. JTWC's ability to accurately forecast tropical cyclones has improved significantly over the past 50 years. Verification statistics show today's 5-day forecast accuracy is about equal to the 2-day forecast accuracy 35 years ago.



Kurt F. Brueske Lieutenant Colonel

United States Air Force

Commander, 17th Operational Weather Squadron Hickam AFB, Hawaii

Lieutenant Colonel Kurt F. Brueske is the Commander, 17th Operational Weather Squadron (17 OWS), Hickam AFB, HI and is responsible for providing operational level weather support for planning and executing air, space, and information operations for Commanders, United States Pacific Command, Pacific Air Forces, Thirteenth Air Force, US Forces Korea, and US Army Pacific. The 17 OWS also provides tropical cyclone reconnaissance and forecasts for the Navy/Air Force Joint Typhoon Warning Center.

Commissioned through the United States Air Force Officer Training School, Lieutenant Colonel Brueske served as a Space Environmental Analyst, North American Aerospace Defense Command, Cheyenne Mountain Air Force Station, CO, Command Weather Briefer, HQ AFSPC, CINCNORAD, and USSPACECOM, Peterson AFB, CO, Staff Officer, Meteorological Satellite (METSAT) Plans and Programs, HQ Pacific Air Forces Weather Directorate, Hickam AFB HI. Lieutenant Colonel Brueske also served as a Physics Instructor, and later Associate Professor and Director of Meteorology, Department of Physics, United States Air Force Academy, CO. Prior to assuming his current duties as 17 OWS Commander, Lieutenant Colonel Brueske served as Chief, Field Programs Division, HQ Air Force Weather Agency where he directed the planning, programming, budgeting, development, acquisition, engineering, configuration management, modification, installation, integration, logistics, and life cycle support of standardized field weather systems and computer processing equipment for the Air Force Weather Weapon System.

Lieutenant Colonel Brueske holds a M.S. Degree in Meteorology (1990) and a Ph.D. in Atmospheric and Ocean Sciences (2001) from the University of Wisconsin-Madison and a M.S. Degree in Military Operational Arts and Sciences from the Air University. His personal awards include the Meritorious Service Medals, Air Force Commendation Medals, Air Force Achievement Medal, Frank J. Seiler Award for Research Excellence from the United States Air Force Academy, the United States Air Force Academy Outstanding Educator Award, and the United States Air Force Outstanding Research and Development Award.



Grant A. Cooper Captain

United States Navy

Commanding Officer, Naval Maritime Forecast Center/Joint Typhoon Warning Center

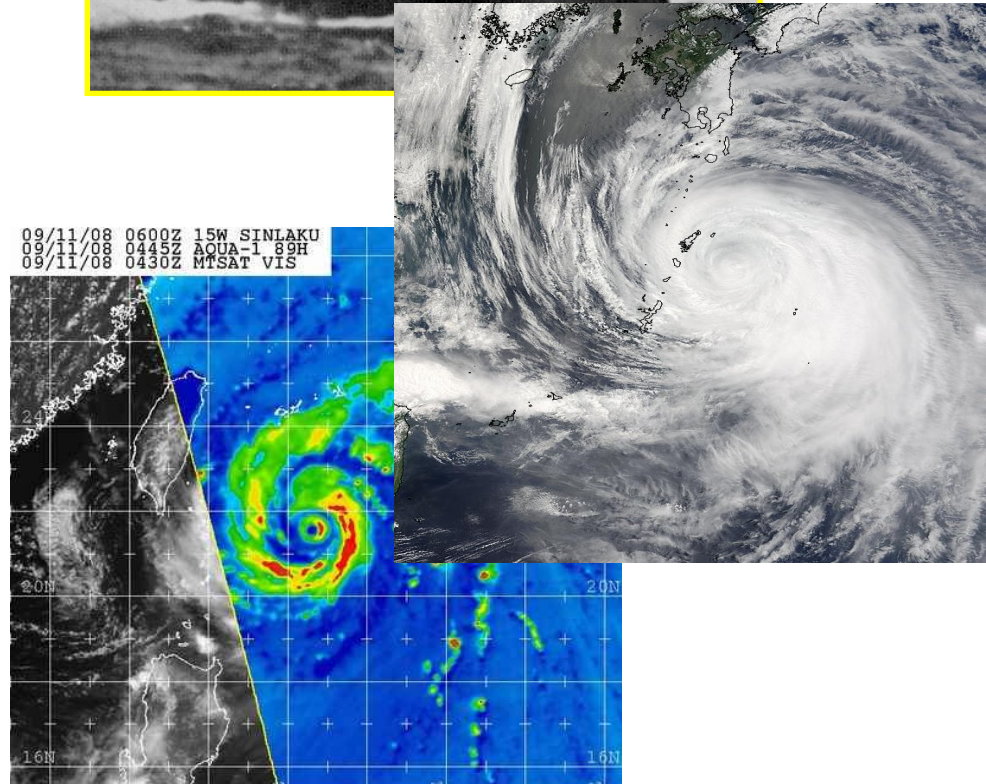
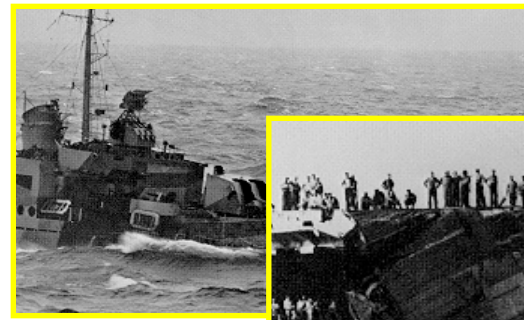
Captain Grant Cooper graduated from San Diego State University with a Bachelor of Science degree in Geophysics and received his commission in 1985 through Officer Candidate School, Newport, RI.

CAPT Cooper's first assignment was on board USS KITTY HAWK (CV-63) where he served as Navigation Division Officer and qualified as a Surface Warfare Officer during deployments to the Western Pacific and North Arabian Sea. In 1987, he transferred to the Oceanography (1800) community and reported to the Naval Oceanographic Office, Stennis Space Center, MS, as a Tactical Oceanography Instructor. In 1993, CAPT Cooper was assigned to the Naval European Meteorology and Oceanography Center, Rota, Spain, as the METOC Services Officer and assistant Operations Officer. During this tour, he also served as a Joint METOC Officer and Action Officer for JTF PROVIDE PROMISE, Naples, Italy, supporting humanitarian relief operations in former Yugoslavia.

Returning to sea in 1996, CAPT Cooper reported to the staff of Commander, Cruiser-Destroyer Group FIVE as the Battle Group Oceanographer and Readiness and Training Officer. In 1998, CAPT Cooper was assigned as the Military Manpower Officer for Commander, Naval Meteorology and Oceanography Command, Stennis Space Center. After receiving his doctorate in 2002, he temporarily served as the Military Deputy for Naval Research Laboratory Monterey. In July 2003, CAPT Cooper reported to the staff of Commander, U.S. Naval Forces Central Command and Commander, U.S. Fifth Fleet, Bahrain, as the Force Oceanographer in support of *Operations Iraqi and Enduring Freedom*. He assumed command of Naval Central Meteorology and Oceanography Center, Bahrain, in September 2004.

CAPT Cooper returned to the staff of Commander, Naval Meteorology and Oceanography Command in November 2005 as Deputy Assistant Chief of Staff for Requirements, Programs and Assessments and in July 2006 he assumed duties as Director of Weather Services for Naval Oceanography Operations Command. CAPT Cooper assumed command of Naval Maritime Forecast Center / Joint Typhoon Warning Center, Pearl Harbor, HI, in June 2008.

CAPT Cooper holds a M.S. Degree in Meteorology and Physical Oceanography (1992) and a Ph.D. in Meteorology (2002) from the Naval Postgraduate School, Monterey, CA. His personal awards include the Defense Meritorious Service Medal, Meritorious Service Medals, Navy and Marine Corps Commendation Medals, and the Navy and Marine Corps Achievement Medals.



JOINT TYPHOON WARNING CENTER

COMMANDING OFFICERS

(USN)

| | |
|----------------------------|-----------|
| CDR Charles E. Tilden | 1959-1961 |
| CAPT William J. Kotsch | 1961-1963 |
| CAPT Richard M. Cassidy | 1963-1965 |
| CAPT J. F. Steuckert | 1965-1967 |
| CAPT J. H. Negele | 1967-1970 |
| CAPT Richard C. Slusser | 1970-1972 |
| CAPT C. E. Blaes | 1972 |
| CAPT Albert T. Buckmaster | 1972-1974 |
| CAPT Glenn D. Hamilton | 1974-1976 |
| CAPT Dean R. Morford | 1976-1979 |
| CAPT Thomas R. Murry | 1979-1980 |
| CAPT Jesus B. Tupaz | 1980-1982 |
| CAPT Kendall G. Hinman Jr. | 1982-1984 |
| CAPT Charles G. Steinbruck | 1984-1986 |
| CAPT Carl W. Hoffman | 1986-1988 |
| CAPT Robert J. Plante | 1988-1990 |
| CAPT Dieter K. Rudolph | 1990-1992 |
| CAPT Donald A. Mautner | 1992-1993 |
| CAPT James F. Etro | 1993-1996 |
| CAPT Cynthia. P. Dillon | 1996-1998 |
| CAPT Debra. M. Ford | 1998-1999 |
| *CAPT W. Tyson Aldinger | 1999 |
| CAPT Terry R. McPherson | 1999-2000 |
| CAPT Frank J. Grandau | 2000-2001 |
| CAPT Pete W. Furze | 2001-2004 |
| CAPT Jose F. H. Atangan | 2004-2006 |
| CAPT John F. O'Hara | 2006-2008 |

PHOTO
NOT
AVAILABLE

Scott C. Van Blarcum

Colonel

United States Air Force

Chief, Weather Resources and Programs Division

Colonel Scott C. Van Blarcum is the Chief, Weather Resources and Programs Division, Directorate of Operations & Training, DCS, Operations, Plans & Requirements, Headquarters United States Air Force, Pentagon. Colonel Van Blarcum plans, programs, and budgets for vital resources required to organize, train, and equip the weather career field to support the Air Force, Army, combatant commands and the national intelligence community.

Col Van Blarcum was born in Rahway NJ, and commissioned through OTS in 1982. Colonel Van Blarcum's command experience includes a flight and a squadron. His staff background includes assignments with the 2nd Armored Division, Air Staff, Hq USAREUR, and US Special Operations Command. He has twice served as an executive officer. He is a master meteorologist.

Prior to his current position, Colonel Van Blarcum was the staff meteorologist at NATO Headquarters in Belgium, the Senior METOC Officer at U. S. Special Operations Command at MacDill AFB, FL, Operations Officer and Commander, 7th Weather Squadron, Heidelberg Germany, Executive Officer to the USAF Director of Weather and Chief, Weather Communications and Plans, Headquarters USAF, Washington DC, Weather Flight Commander, 16th Operational Support Squadron, Hurlburt Field, FL, Range Staff Meteorologist and Executive Officer, 412th Test Wing, Edwards AFB, CA, Officer in Charge, Cadre Weather Team, 2nd Armored Division, Detachment 14, 5th Weather Squadron, Fort Hood, TX, Instructor Aerial Reconnaissance Officer, 54th Weather Reconnaissance Squadron, Andersen AFB, Guam, and Chief, Systems Programming, USAF Environmental Technical Applications Center, Scott AFB, IL. Col Van Blarcum logged 750 flight hours in the WC-130 and has 35 tropical cyclone penetrations.

Colonel Van Blarcum holds Bachelor of Science and Master of Science degrees in Meteorology from Rutgers Univeristy. He is also a graduate of the USAF Squadron Officer School, Maxwell AFB, AL and the Joint Combined Warfighting School, Armed Forces Staff College, Norfolk, VA. He is the recipient of the Defense Superior Service Medal, the Defense Meritorious Service Medal , the Meritorious Service Medal with three oak leaf clusters, the Air Medal with one oak leaf cluster, the Air Force Commendation Medal with 2 oak leaf clusters, the Air Force Achievement Medal, the Global War on Terrorism Service Medal, and the Air and Space Campaign Medal.



David W. Titley
Rear Admiral

United States Navy

**Commander, Naval
Meteorology and
Oceanography Command**

A native of Schenectady, New York, Rear Adm. Titley was commissioned through the Naval Reserve Officers Training Commissioning program in 1980, after graduating from Pennsylvania State University. While serving aboard USS *Farragut* (DDG 37) from 1980-1983, Rear Adm. Titley qualified as a Surface Warfare Officer in 1982, and transferred to the Oceanography community the following year.

Following assignments at the Regional Oceanography Centers at Pearl Harbor and Guam during 1984 and 1985, he was assigned as Oceanography Officer aboard USS *Belleau Wood* (LHA 3) from 1985-1987. Rear Adm. Titley was then ordered to the Naval Postgraduate School, where he received a Master of Science in meteorology and oceanography.

Following a tour as the Oceanographer aboard USS *Carl Vinson* (CVN 70) during 1990, Rear Adm. Titley returned to the Naval Postgraduate School. In 1993, he was assigned as the first Meteorological and Oceanographic officer to Carrier Group 6. Rear Adm. Titley then reported to the Naval Oceanographic Office in 1995, where he served as the Director of the Warfighting Support Center through May 1998.

In June 1998, Rear Adm. Titley completed his tropical cyclone intensification research, and was awarded a Doctor of Philosophy in meteorology from the Naval Postgraduate School. He then reported to Commander, 7th Fleet, where he served as Fleet Meteorologist and Oceanographer, and frequently acted as the Current Operations Officer. Rear Adm. Titley has completed seven deployments to the Mediterranean, Indian Ocean and Western Pacific theaters.

Rear Adm. Titley reported to the staff of the Assistant Secretary of the Navy (Research, Development and Acquisition) in June 2000, where he served in the office of Mine and Undersea Warfare. In the summer of 2001, he served as the Executive Assistant to the Principal Deputy Assistant Secretary of the Navy (Research, Development and Acquisition).

Rear Adm. Titley then reported to the U.S. Commission on Ocean Policy chaired by retired Adm. James D. Watkins, in March 2002, as the Special Assistant to the Chairman for Physical Oceanography. In May 2003, he was assigned to the Office of the Secretary of Defense Director of Net Assessment and assumed duties as Senior Military Assistant. He then assumed command of Fleet Numerical Meteorology and Oceanography Center in Monterey, Calif., in August 2004. The following year Rear Adm. Titley was named the first Commanding Officer of the Naval Oceanographic Operations Command. In April 2007, he was selected for

**JOINT TYPHOON WARNING CENTER
DIRECTORS
(USAF)**

| | |
|-------------------------------|-----------|
| Lt Col Robert M. Hoffman | 1959-1961 |
| Lt Col Leornard H. Hutchinson | 1961-1963 |
| Lt Col Ronald C. Lame | 1963-1965 |
| Lt Col Robert E. Boyce | 1965-1967 |
| Maj William D. Roper | 1967-1969 |
| Lt Col John J.R. Kinney | 1969-1971 |
| Lt Col Hiroshi Nishimoto | 1971-1973 |
| Lt Col Gary D. Atkinson | 1973-1975 |
| Lt Col Serhij Pilipowskyj | 1975-1977 |
| Lt Col James K. Lavin | 1977-1979 |
| Lt Col John W. Direcks | 1979-1981 |
| Lt Col Dean A. Morss | 1981-1983 |
| Lt Col David W. McLawhorn | 1983-1985 |
| Lt Col Vernon G. Patterson | 1985-1987 |
| Lt Col Daniel J. McMorrow | 1987-1989 |
| Lt Col Charles P. Guard | 1989-1993 |
| Lt Col Peter A. Morse | 1993-1995 |
| Lt Col Joseph P. Bassi | 1995-1996 |
| Lt Col Mark J. Andrews | 1996-1998 |
| *Lt Col Wendell T. Stapler | 1998-2000 |
| Lt Col Mark D. Zettlemoyer | 2000-2001 |
| Lt Col Gregory F. ... | 2001- |

JOINT TYPHOON WARNING CENTER PEARL HARBOR, HAWAII

Commanding Officer
Captain Grant A. Cooper

Director
Mr. Robert J. Falvey

Technical Advisor
Mr. Edward M. Fukada

OFFICERS

| | | |
|----------------------|--------------------|-----------------------|
| LCDR Michael Vancas | Capt Kathryn Payne | LT Christopher Morris |
| LCDR Jeremy Callahan | LT Greg Ray | Capt Stephen Chesser |
| Maj Joel Fenlason | LT Matthew Kucas | LTJG John Mayers |

ENLISTED

| | | |
|---------------------|----------------------|--------------------|
| MSgt Michael Oates | SSgt Rex Ames | SrA Rachelle Smith |
| TSgt Kenneth Viault | SSgt Richard Kienzle | |

CIVIL SERVICE

| | | |
|------------------------|-----------------|------------------|
| Mr. Stephen Barlow | Mr. Dana Uehara | Mr. Todd Brandon |
| Mr. Richard Ballucanag | Mr. Aaron Lana | |



Tom Copeman
Rear Admiral

United States Navy

U. S. Pacific Fleet
Deputy Chief of Staff for
Operations, Training and
Readiness

Rear Admiral Tom Copeman graduated from High School in Honolulu, Hawaii after which he attended Creighton University, Omaha, Neb. where he received a B.S. in Biology in 1981. He was commissioned April 2, 1982 at Officer Candidate School, Newport R.I.

Rear Adm. Copeman has served in Cruisers and Destroyers in both the Atlantic and Pacific Fleets. His first assignment was as Electrical Officer and Main Propulsion Assistant in USS Leftwich (DD 984). His second division officer tour was as a Gas Turbine Inspector for Pacific Fleet Propulsion Examining Board. Following graduation from Surface Warfare Officers School Department Head Course in 1987, he reported as the commissioning Engineer Officer in USS Philippine Sea (CG 58) and participated in combat operations in the Persian Gulf War while assigned in her. Subsequent sea tours include Executive Officer in USS Lake Champlain (CG 57) and as Commanding Officer USS Benfold (DDG 65) where his ship received the Comdesron Seven 1999 Battle 'E' for the most combat ready unit in the Squadron. Following a tour as Fleet Operations Officer in Second Fleet, Rear Adm. Copeman commanded Destroyer Squadron 28 where he deployed, as the Sea Combat Commander, in the George Washington Carrier Strike Group to the Arabian Gulf in support of Operation Iraqi Freedom and Operation Enduring Freedom.

While ashore, Rear Adm. Copeman has served in the U. S. Strategic Command, Omaha, Neb. as an action officer in the Special Technical Operations cell of the Current Operations Directorate (J31). His next shore tour was as a BMC4I requirements officer in the Theater Air Warfare Branch in the Surface Warfare Directorate (N76), Office of the Chief of Naval Operations. He served as Executive Assistant to the Deputy Commander and Chief of Staff, US Atlantic Fleet, the Director of Navy Senate Liaison in the Office of Legislative Affairs and the Chief of Staff for Naval Surface Forces, San Diego, Calif. He is currently assigned as Deputy Chief of Staff for Operations and Training for the US Pacific Fleet.

Rear Adm. Copeman is a graduate of the US Army Command and General Staff Course, Fort Leavenworth, Kan. and the Armed Forces Staff College and is a designated Joint Specialty Officer. He has been awarded a Masters of Science Degree in Administration from Central Michigan University. He also completed the Massachusetts Institute of Technology Seminar XXI program on National Security Affairs.

Rear Adm. Copeman has been awarded the Legion of Merit (5 awards),